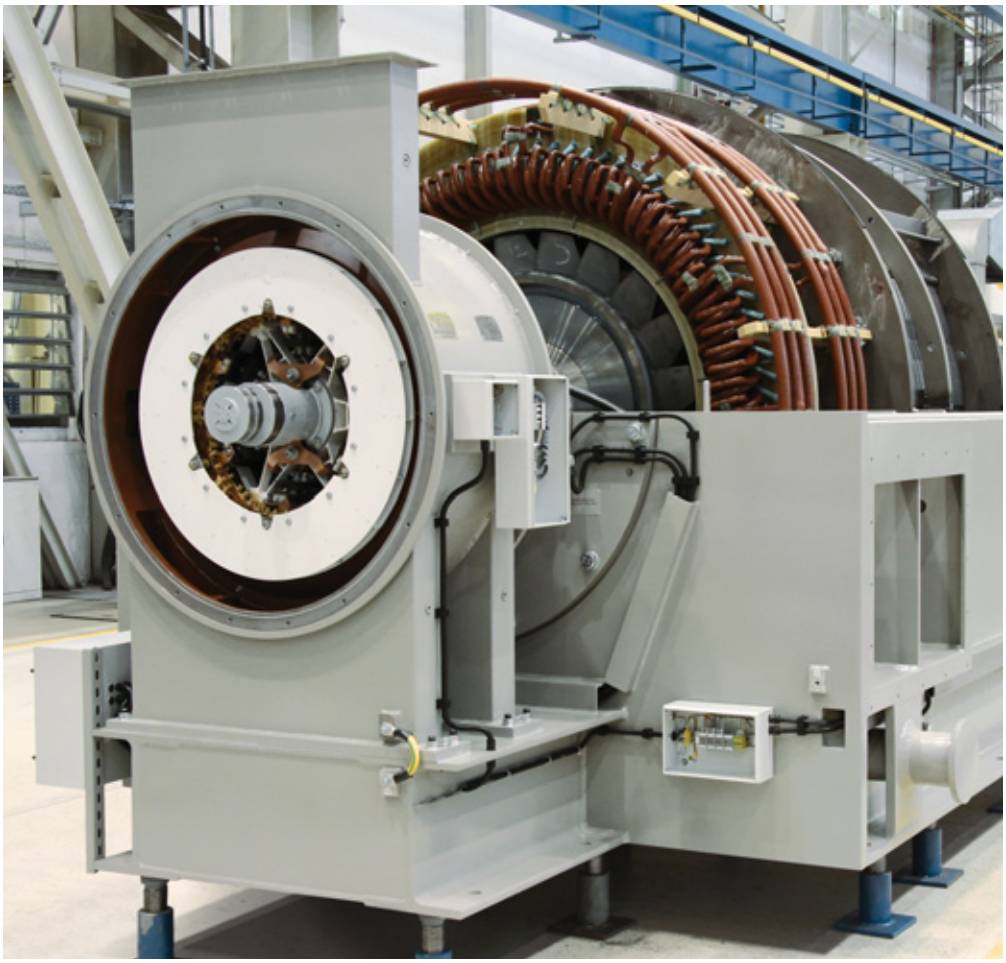
Siemens Air-Cooled Generators SGen-100A-4P Series

with ratings from 25 MVA up to 70 MVA



SGen-100A-4P Series at Generator Plant Erfurt, Germany

As one of the international market leaders in the manufacturing of synchronous machines, Siemens has accumulated many decades of experience in the production of generators. Proven four-pole air-cooled generators, from our SGen-100A-4P series, are the Siemens answer for turbine generators in industrial plants.

Our air-cooled generators are developed by using state-of-the-art methods. By working with special computer programs for calculation, design and production, we can optimally match the generators to the customers' needs.

Answers for energy.

SIEMENS

Four-pole three-phase synchronous generator

Outstanding design features of the Siemens air-cooled SGen-100A-4P series generators include:

- high efficiency,
- low noise emissions,
- low installation and commissioning costs,
- high serviceability and
- long service life.

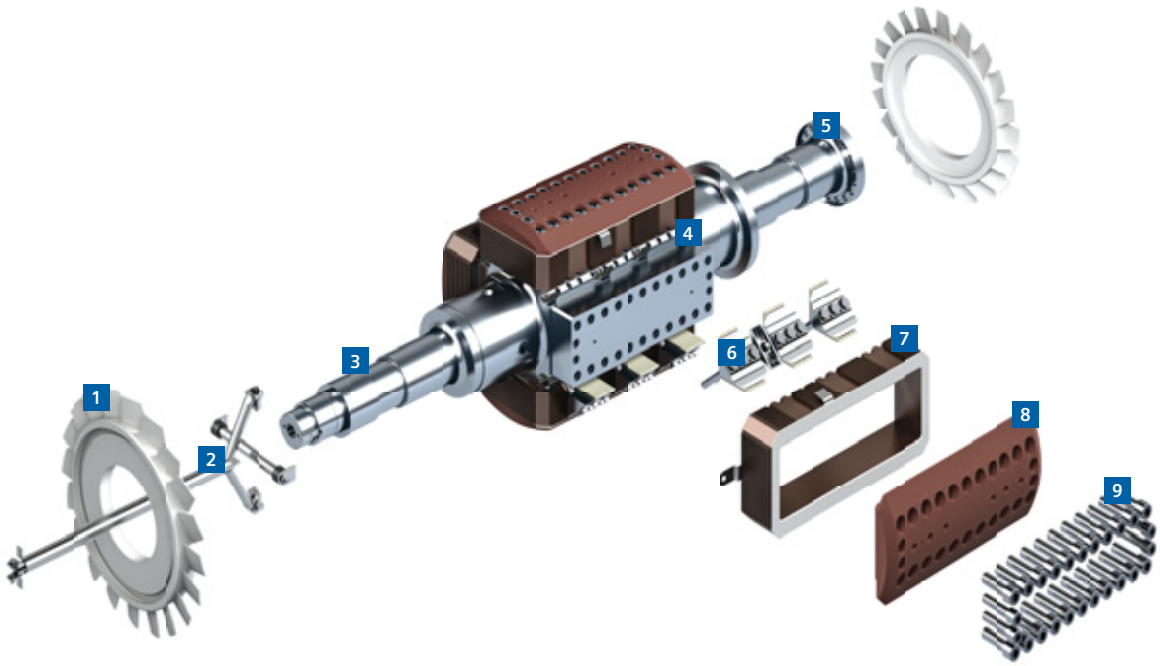
For each customer project, a customized generator is developed according to the individual technological specifications, output and customer needs. Using a modular building-block system, the required generator type is designed by choosing from different diameters and by making adjustments to length. This enables us to supply our customers with generators specially tailored to their requirements. As an option, the generator can also be supplied with a gearbox.

Siemens four-pole three-phase synchronous generators are used as high-voltage generators with a solid salient-pole rotor. Their rotor windings are indirectly cooled by air.

These generators use brushless excitation as a standard. The exciter power is supplied by an exciter with rotating rectifiers. The exciter is a stationary-field machine with the rotor mounted on the generator shaft. Alternatively, static excitation using slip rings is also available.

The standard design is IM 1005 featuring a frame with end shield bearings.

Industrial plants equipped with steam and gas turbines, and SGen-100A-4P series generators keep process costs down due to high efficiency levels of cogeneration. This ensures a considerable degree of independence from public power supply.



1	Blower	6	Pole Winding Support
2	Exciter Current Conductor	7	Rotor Coils
3	Journal Area	8	Pole Shoe
4	Rotor Shaft	9	Pole Shoe Screws
5	Coupling		

1 **Welded casing**

2 **Stator winding and insulation** are form-wound coils featuring Siemens epoxy-mica (MICALASTIC®) insulation technology

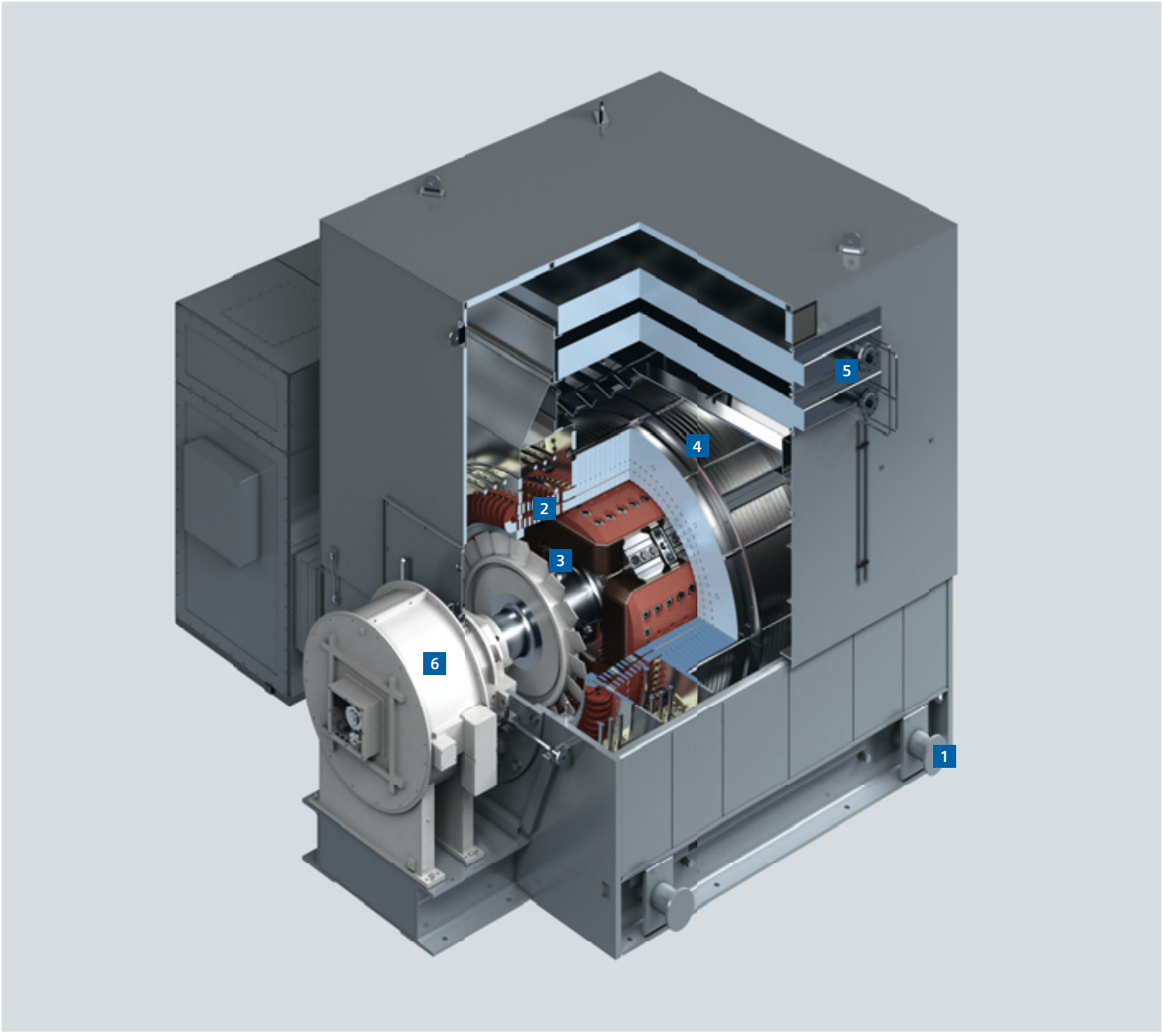
3 **Salient-pole rotor** with solid pole shoes

4 **Stator core**

5 **The coolers** are implemented either in TEWAC[1], CACA[2] or DAC[3] cooling systems

6 **Brushless exciter set** with or without Permanent Magnet Generator (PMG)

1 TEWAC = Totally Enclosed Water-to-Air Cooling
2 CACA = Closed Air-to-Air Cooling
3 DAC = Direct Air Cooling (cooling air intake via filter)



Technical data

Frequency	Model	Power factor	Apparent power	Efficiency	Terminal voltage
50 Hz	SGen5-100A-4P	0.80 to 0.90	25 MVA to 70 MVA	up to 98.5 %	6.3 kV to 15.0 kV
60 Hz	SGen6-100A-4P	0.80 to 0.90	25 MVA to 65 MVA	up to 98.5 %	6.3 kV to 13.8 kV

SGen-100A-4P Series Air-Cooled Generators: References

Wesel, Germany Waste incineration plant (AEZ)	
Performance	
Generator Type:	SGen5-100A-4P
Apparent Power:	27.7 MVA
Terminal Voltage:	10.5 kV

BEC Cuijk, Netherlands Wood-fired cogeneration power plant (CHP)	
Performance	
Generator Type:	SGen5-100A-4P
Apparent Power:	38.1 MVA
Terminal Voltage:	10.5 kV

Eilenburg, Germany Stora Enso paper mill	
Performance	
Generator Type:	SGen5-100A-4P
Apparent Power:	42.2 MVA
Terminal Voltage:	10.5 kV

For more information please contact your local Siemens sales representative.

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